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Applicant(s):	Thomas P. Glenn, Steven Webster, Roy Dale Hollaway		
Assignee:	Amkor Technology, Inc.		
Title:	FLIP CHIP ON GLASS IMAGE SENSOR PACKAGE		
Serial No.:	09/713,848	Filed:	November 15, 2000
Examiner:	Graybill, D.	Group Art Unit:	2827
Docket No.:	G0030		

Monterey, CA
April 17, 2002

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE DESCRIPTION

Change the paragraph extending from Page 7, line 9 to Page 7, line 17 as follows:

Package 100 further includes a window 110 above active area 104. Generally, window 110 is transparent to the radiation of interest, e.g., to the radiation to which active area 104 of image sensor 102 is responsive, as those of skill in the art will understand. Generally, the transmittance of window 110 is sufficient to allow the necessary minimum amount of radiation needed for the proper operation of image sensor 102 to pass through window 110.

Change the paragraph extending from Page 17, line 30 to Page 18, line 6 as follows:

FIG. 6 is a cross-sectional view of window 110 of FIG. 5 at a later stage of fabrication. Referring now to FIG. 6, a mask 602, e.g., photoresist, is formed on metal layer 502. Mask 602 is formed to cover and protect a protected, e.g., first, region 502M of metal layer 502, which corresponds to

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exterior traces 116. Mask 602 also covers and protects vias 118 at the interface of exterior surface 110E, i.e., vias 118 terminate at exterior surface 110E within protected region 502M of metal layer 502. An unprotected, e.g., second, region 502E of metal layer 502 is not covered by mask 602, and is therefore exposed and unprotected.

Change the paragraph extending from Page 24, line 19 to Page 24, line 24 as follows:

This application is related to Glenn et al., co-filed and commonly assigned U.S. Patent Application Serial No. [[ATTORNEY DOCKET NO. G0030M]] 09/714,682 entitled "FLIP CHIP ON GLASS IMAGE SENSOR PACKAGE FABRICATION METHOD," which is herein incorporated by reference in its entirety.

IN THE CLAIMS

Claim 2 has been cancelled without prejudice.

Claims 1, 3, 21 and 27 have been amended as follows:

1. (AMENDED) A structure comprising:

an image sensor having an active area and a bond pad on a first surface of said image sensor;

a window having an interior surface and an exterior surface opposite said interior surface, said interior surface of said window facing said first surface of said image sensor and having a total area less than a total area of said first surface of said image sensor; and

an electrically conductive via extending through said window from said interior surface to said exterior surface of said window, said via being electrically connected to said bond pad.

3. (AMENDED) The structure of Claim [2] 1 wherein said structure is a chip size image sensor package.

21. (AMENDED) An image sensor package comprising:

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an image sensor having an active area and bond pads on a first surface of said image sensor;

a window mounted to said image sensor, said window having an area less than an area of said first surface of said image sensor;

a plurality of electrically conductive interior traces on an interior surface of said window;

a plurality of electrically conductive bumps electrically and physically connecting said bond pads to said interior traces;

a plurality of electrically conductive vias extending from said interior surface of said window to an exterior surface of said window, said vias being electrically connected to said interior traces; [and]

a plurality of electrically conductive exterior traces on said exterior surface of said window, said exterior traces being electrically connected to said vias;

a plurality of electrically conductive pads on said exterior traces; and

a plurality of electrically conductive interconnection balls on said pads.

27. (AMENDED) An image sensor package comprising:

an image sensor having a bond pad on a first surface of said image sensor;

a window having an interior surface, [an] the area of said window being less than [an] the area of said first surface of said image sensor;

an electrically conductive interior trace on said interior surface of said window; and

an electrically conductive bump electrically connecting said bond pad to said interior trace.

New Claims 28 and 29 have been added as follows:

28. (NEW) The structure of Claim 10 further comprising an electrically conductive interconnection ball on said pad.

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29. (NEW) An image sensor package comprising:

an image sensor having an active area and bond pads on a first surface of said image sensor;

a window mounted to said image sensor, the area of said window in a plane parallel to said first surface of said image sensor being less than the area of said first surface of said image sensor in said plane;

a plurality of electrically conductive interior traces on an interior surface of said window;

a plurality of electrically conductive bumps electrically and physically connecting said bond pads to said interior traces;

a plurality of electrically conductive vias extending from said interior surface of said window to an exterior surface of said window, said vias being electrically connected to said interior traces;

a plurality of electrically conductive exterior traces on said exterior surface of said window, said exterior traces being electrically connected to said vias;

a plurality of electrically conductive pads on said exterior traces; and

a plurality of electrically conductive interconnection balls on said pads.

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Assistant Commissioner for Patents, Washington, D.C. 20231, on April 17, 2002.

Attorney for Applicant(s) — April 17, 2002 Date of Signature

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